UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 155
Seattle, WA 98101-3123

OFFICE OF
WATER AND
WATERSHEDS

NOV 27 2018

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Honorable Chairman Austin Greene, Jr.
Confederated Tribes of Warm Springs
P.O. Box C
1233 Veteran's Street
Warm Springs, Oregon 97761-3001

Re: Immediate Public Health Concerns and Sanitary Survey Significant Deficiencies at the Warm Springs Water Treatment Plant PWS ID# 104101247

Dear Chairman Greene:

This letter is to inform you that the Environmental Protection Agency has serious concerns regarding the Warm Springs Water Treatment Plant. We previously have shared our concerns with your staff and now are elevating these issues to you, with the goal of working together at the leadership level, to quickly improve conditions.

Significant deficiencies were identified at the Warm Springs Water Treatment Plant during the recent July 2018 sanitary survey, many of which were also identified in the January 2015 sanitary survey. The EPA is concerned by the apparent lack of attention the significant deficiencies highlighted in the 2018 sanitary survey are receiving from the Tribe.

In light of this concern and the recent boil water advisory, the turbidity exceedances resulting from the failure to use coagulant for a number of days, and other issues, the EPA is requesting a response no later than December 7, 2018, explaining how the Confederated Tribes of Warm Springs (Tribe) intends to address the most immediate public health concerns listed below.

Immediate Public Health Concerns

In order to address the threat to public health, **no later than December 7, 2018**, please provide the EPA a list of actions with an associated timeline that the Tribe intends to take to address the following concerns:

1. Recalibrate the turbidimeter and maintain calibration on a monthly basis.
2. Remove the solids from the settling tanks.
3. Develop and implement standard operating procedures regarding the coagulation process (see Enclosure A, first bullet).

July 2018 Sanitary Survey Significant Deficiencies

The EPA is also concerned about the overall list of significant deficiencies outlined in the July 2018 sanitary survey. These significant deficiencies also have the potential to impair water quality and jeopardize public health (Enclosure A). Under the regulations, **all significant deficiencies must be corrected within 45 days** from receipt of this letter. Many of these significant deficiencies were noted in the previous sanitary survey of January 2015. If the Tribe is not able to address the significant deficiencies within 45 days of receiving this letter, the Tribe will be in violation of the National Primary Drinking Water Regulations (40 CFR §142.16(b)) and must notify the EPA immediately. If the Tribe is unable to address the significant deficiencies, the Tribe must submit an approvable corrective action plan (CAP) with a timeline to address these deficiencies. The EPA reserves the right to use available authorities pursuant to Section 1414 of the Safe Drinking Water Act, or under Section 1431 if necessary to ensure protection of public health.

The list of significant deficiencies for the Tribe's water system is provided in Enclosure A – Significant Deficiencies. If your staff have any questions regarding how to address the findings of the sanitary survey, please contact Ricardi Duvil of my staff at (206) 553-2578. If the Tribe has taken any actions to address the July 2018 sanitary survey, please submit documentation and proof of significant deficiency corrections made to Mr. Duvil at duvil.ricardi@epa.gov.

We appreciate the Tribe's cooperation and timely response to the above requests. We also appreciate the Tribe's broader invitation to meet and further develop relationships with the EPA. Our Regional Administrator, Chris Hladick, is looking forward to meeting with the Tribal Council on December 4, 2018. This face-to-face meeting will provide an opportunity to discuss the path forward on the drinking water system deficiencies and other issues of importance to the Tribe.

Lastly, please feel free to contact me any time at (206) 553-1855. Our government-to-government relationship is of great value to the EPA and we want to continue working together, as partners, to address our shared environmental priorities.

Sincerely,

Daniel D. Opalski
Director

Enclosure A - Significant Deficiencies for Warm Springs Water Treatment Plant

cc: Alyssa Macy, Chief Operations Officer, Warm Springs Tribe

Travis Wells, General Manager, Warm Springs Tribe

Mathew Martinson, Indian Health Services

Enclosure A – Significant Deficiencies for Warm Springs Water Treatment Plant

- Page 3 # 91-WTP: The primary coagulant Aluminum Chlorohydrate (ACH) is not being optimized for the process. The Streaming Current Monitor (SCM) is operating but inaccurate and the operators do not jar test. Without having the SCM or daily jar testing, there is no accurate measure to indicate the correct dosage of ACH. Added to this concern is the injection of chlorine into the process at the point where the ACH is injected. This complicates the ACH dosage because chlorine interferes with the ACH.

- Page 5 # 137- Tee Wees: Access manhole openings for the storage structure are 4 inches or greater above the reservoir roof surface, with a lid 2 inches overlapping, water tight and locked. Top hatch needs a gasket.

- Page 6 # 138- The roof top vent has rusted through into the WST with holes and the vent needs 24-Mesh screen to prevent insect entrance.

- Page 6 # 137- Kah-Ne-Ta: Access manhole openings for the storage structure are 4 inches or greater above the reservoir roof surface, with a lid 2 inches overlapping, water tight and locked. Top hatch needs a gasket.

- Page 14 # 237- Small Out of Service Concrete WST needs to be physically disconnected from distribution system.

- Page 14 # 236-WTP CFE Turbidimeter sampling delay needs to be reduced.

- Page 14 # 235-WTP: River intake air scour system inoperative. Gasket blown on screen in river reducing effectiveness of air scour cleaning.

- Page 14 # 234-WTP: Filter #2 IFE Turbidimeter sampling pump is non-operable.

- Page 14 # 233-WTP: Turbidimeters are out of calibration.

- Page 14 # 232-WTP: Sedimentation basin needs settled solids removed.

- Page 12 # 162-WTP: Ventilation in the main service pump room is lacking and require the operators to run portable fans and opening the doors.

- Page 11 # 138-Greely East: overflow lines, air vents, drainage lines or clean out pipe turned downward or covered, screened and terminated a minimum of 2 times the diameter of the water outlet above the ground or storage structure surface. Overflow has flapper valve that does not fully seal.

- Page 11 # 137-Greely East: Access manhole openings for the storage structure are 4 inches or greater above the reservoir roof surface, with a lid 2 inches overlapping, water tight and locked. Unable to access top of water tank to inspect items listed.

- Page 11 # 136-Greely East: An overflow provided that discharges to daylight in a way that will preclude the possibility of backflow to the reservoir and, where practical, provided with a metal screen or flapper valve. Overflow lacks proper 24-mesh screen covering opening of pipe.

- Page 10 # 137-Greely West: Access manhole openings for the storage structure are 4 inches or greater above the reservoir roof surface, with a lid 2 inches overlapping, water tight and locked. Top hatch needs a gasket.

- Page 9 # 137- West Hills East: Access manhole openings for the storage structure are 4 inches or greater above the reservoir roof surface, with a lid 2 inches overlapping, water tight and locked. Unable to access top of water tank to inspect items listed.

- Page 9 # 136- West Hills East: An overflow provided that discharges to daylight in a way that will preclude the possibility of backflow to the reservoir and, where practical, provided with a metal screen or flapper valve. Overflow lacks proper 24-mesh screen covering opening of pipe.

- Page 9 # 135-West Hills East: The storage structure is not safely accessible to inspector. This storage tank is the oldest on the water system. The roof access ladder is unsafe due to not having a ladder cage.

- Page 8 # 138- West Hills West: Overflow lines, air vents, drainage lines or clean out pipe turned downward or covered, screened and terminated a minimum of 2 times the diameter of the water outlet above the ground or storage structure surface. The 24-mesh screen is torn on vent and a hole in the roof structure was found.

- Page 8 # 137- West Hills West: Access manhole openings for the storage structure are 4 inches or greater above the reservoir roof surface, with a lid 2 inches overlapping, water tight and locked. Top hatch needs a gasket.

- Page 8 # 136- West Hills West: An overflow provided that discharges to daylight in a way that will preclude the possibility of backflow to the reservoir and, where practical, provided with a metal screen or flapper valve. Overflow lacks proper 24-mesh screen covering opening of pipe.

- Page 7 # 138- Southeast: Overflow lines, air vents, drainage lines or clean out pipe turned downward or covered, screened and terminated a minimum of 2 times the diameter of the water outlet above the ground or storage structure surface. The roof top vent has rusted through into the WST with holes.

- Page 7 # 137-Southeast: Access manhole openings for the storage structure are 4 inches or greater above the reservoir roof surface, with a lid 2 inches overlapping, water tight and locked. Top hatch needs a gasket.

- Page 7 # 136-Southeast: An overflow provided that discharges to daylight in a way that will preclude the possibility of backflow to the reservoir and, where practical, provided with a metal screen or flapper valve. Overflow lacks proper 24-mesh screen covering opening of pipe.

Corrective Action Plan

EPA Region 10

Tribal Public Water System Supervision Program

A proposed corrective action plan must provide a written description of **how** and **on what schedule/when** the following significant deficiencies will be/were addressed. Please fill in the table below and submit this proposed corrective action plan within 45 days as stated in our letter dated November 28, 2018. Please submit photos, receipts, or other items documenting corrections that have already been made (reference documentation with written statement in column B) to Ricardi Duvil at duvil.ricardi@epa.gov

PWSID:	104101247
System Name:	Warm Springs Community Water System
Primary Source:	Surface Water
Sanitary Survey Date:	7/18/2018
Surveyor:	Laddie Folster
Notice Date:	11/28/2018

Corrective Action Plan Due Date:	**1/12/2019**

Deficiency	Schedule to Address Deficiency		Accomplishments (date completed)
	Milestone/Corrective Action Description	Scheduled Date	
Page 3 # 91-WTP: Are instrumentation and controls adequate for the process being utilized and in proper order? The primary coagulant Aluminum Chlorohydrate (ACH) is not being optimized for the process. The Streaming Current Monitor (SCM) is operating but inaccurate and the operators do not jar test. Without having the SCM or daily jar testing, there is no accurate measure to indicate the correct dosage of ACH. Current method is based on operator experience, changes in Turbidity and guessing. Added to this is the injection of chlorine into the process at the point where the ACH is injected. This complicates the ACH dosage because chlorine interferes with the ACH.			
Page 5 # 137-Tee Wees: Are access manhole openings for the storage structure 4 inches or greater above the reservoir roof surface, with a lid 2 inches overlapping, water tight and locked? Top hatch needs a gasket.			

Deficiency	Schedule to Address Deficiency		Accomplishments (date completed)
	Milestone/Corrective Action Description	Scheduled Date	
Page 5 # 138-Tee Wees: Are overflow lines, air vents, drainage lines or clean out pipe turned downward or covered, screened and terminated a minimum of 2 times the diameter of the water outlet above the ground or storage structure surface? The roof top vent has rusted through into the WST with holes and the vent needs 24-Mesh screen to prevent insect entrance.			
Page 6 # 137-Kah-Ne-Ta: Are access manhole openings for the storage structure 4 inches or greater above the reservoir roof surface, with a lid 2 inches overlapping, water tight and locked? Top hatch needs a gasket.			
Page 6 # 138-Kah-Ne-Ta: Are overflow lines, air vents, drainage lines or clean out pipe turned downward or covered, screened and terminated a minimum of 2 times the diameter of the water outlet above the ground or storage structure surface?			
Page 7 # 136-Southeast: Is an overflow provided that discharges to daylight in a way that will preclude the possibility of backflow to the reservoir and, where practical, provided with a metal screen or flapper valve? Overflow lacks proper 24-mesh screen covering opening of pipe.			
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Page 9 # 135-West Hills East: Is the storage structure safely accessible to inspector? This storage tank is the oldest on the water system. The roof access ladder is unsafe due to not having a ladder cage.			

Deficiency	Schedule to Address Deficiency		Accomplishments (date completed)
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Deficiency	Schedule to Address Deficiency		Accomplishments (date completed)
	Milestone/Corrective Action Description	Scheduled Date	
Page 12 # 162-WTP: Is adequate ventilation provided in the pump house for dissipation of excess heat and moisture from the equipment? Ventilation in the main service pump room is lacking and require the operators to run portable fans and opening the doors.			
Page 14 # 232-WTP: Sedimentation basin needs settled solids removed.			
Page 14 # 233-WTP: Turbidimeters are out of calibration.			
Page 14 # 234-WTP: Filter #2 IFE Turbidimeter sampling pump is non-operable.			
Page 14 # 235-WTP: River intake air scour system inoperative. Gasket blown on screen in river reducing effectiveness of air scour cleaning.			
Page 14 # 236-WTP CFE Turbidimeter sampling delay needs to be reduced.			
Page 14 # 237- Small Out of Service Concrete WST needs to be physically disconnected from distribution system.			

List any additional attachments included with this plan:

I understand that failing to meet an EPA approved Deficiency Corrective Action Plan may constitute a violation of the Safe Drinking Water Act.

Name (print) address

Phone email

Signature Date

EPA Use Only

Deficiency	Schedule to Address Deficiency		Accomplishments (date completed)
	Milestone/Corrective Action Description	Scheduled Date	
approved by (print)			closed date
	STAFF PERSON TITLE Signature	Date	

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, Washington 98101-3140

July 18, 2008

Reply To: OWW-136

Roy Spino
Acting Water/Wastewater Engineer
Warm Spring Utilities Department
P.O. Box 1196
Warm Springs, OR 97761

Re: Warm Springs Water Treatment Plant Selection for a Comprehensive Performance Evaluation Training

Dear Mr. Spino:

The Environmental Protection Agency (EPA) and Indian Health Service (IHS) are pleased to let you know that your system has been selected to have a Comprehensive Performance Evaluation (CPE) training. We wish to complete the CPE training from September 9, 2008, through September 12, 2008. The purpose of the CPE is to assist small utilities to comply with current and future regulations by providing training based on detailed analysis of the utility operations and management. The evaluation will be performed **at no cost to the Warm springs Utilities Department** and the results of the CPE, though valid in content, would **not be used as part of any enforcement action** by the EPA Region 10.

EPA selected your system because we believe your system would receive the most benefit from learning where the water plant stands with respect to compliance with current regulations and how cost-effective measures may enhance treatment through optimization. EPA and IHS are concerned that high water demand and infrastructure age make it difficult to comply with all regulations. Our hopes are that this training will help you better operate your systems and help determine what next steps are needed for the system to be able to provide safe, reliable, and clean drinking water.

The evaluation procedure that will be used is the Composite Correction Program (CCP) approach. The CPE is the first phase of a CCP. A follow-up Comprehensive Technical Assistance (CTA) program will follow to implement recommendations and refinements identified in the CPE. During the CPE evaluation, all aspects of the design, operation, maintenance, and administration of your system would be reviewed and evaluated with respect to their impact on performance.

Please find enclosed two very important documents:

1. The tentative agenda which provides general times for CPE activities and which utility staff should attend.
2. The CPE Background Information and Data Request which lists utility documents that you will gather prior to September for our review.

We wish to thank you and your staff for your cooperation with U.S. EPA Region 10, and IHS in this CPE process to evaluate the water treatment plant for Warm Springs. We believe that the results of this evaluation will be valuable to the utility department in achieving compliance with present and future drinking water regulations. The Warm Springs Utility Department should receive a final CPE report within a short time period after the week long evaluation is complete.

If you have any questions regarding the CPE process or the meeting logistics, please call Bill Chamberlain, our CPE specialist at (206) 553-8515, or send an e-mail to him at chamberlain.william@epa.gov with your questions. Also, feel free to contact either of us, Lisa Jacobsen at (206) 553-6917 or jacobsen.lisa@epa.gov and Steve Anderson at (206) 615-2790 or steven.anderson@ihs.gov.

Sincerely,

Lisa Jacobsen
Tribal Drinking Water Coordinator
EPA Region 10

Sincerely,

Steven Anderson
CAPT USPHS
District Utility Consultant
Portland Area IHS

Enclosures

CC: Michael Gearheard, EPA-R10
Marie Jennings, EPA-R10
Elizabeth Corr, EPA-HQ
Stephen Heare, EPA-HQ

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
WATER AND WATERSHEDS

May 25, 2017

Re: Monitoring Requirements under the Long Term 2 Enhanced Surface Water Treatment Rule
Warm Springs Water Treatment Plant PWS ID# 104101247

Steve Courtney, Chief Operator
Warm Springs Water Treatment Plant
Utilities Department
Confederated Tribes of Warm Springs
P.O. Box 1196
Warm Springs, Oregon 97761

Dear Mr. Courtney:

The purpose of this letter is to inform you that as per the Long Term 2 Enhanced Surface Water Treatment (LT2) Rule, the Warm Springs Water Treatment Plant will be required to conduct *E. coli* monitoring every two weeks for one year starting **October 2017.**

The LT2 rule, which was adopted in January 2006 to reduce the risk of disease incidence caused by *Cryptosporidium* and other micro-organisms in drinking water, applies to all public water systems which treat surface water or groundwater under the direct influence of surface water (GWUDI). The monitoring required under this rule is in addition to your other existing monitoring requirements.

The LT2 rule requires two rounds of monitoring. Monitoring for the first round was previously completed. The second round of monitoring is scheduled to begin October 2017. Water systems serving from 10,000 – 49,999 people are required to monitor for *Cryptosporidium, E. coli,* and turbidity once/month. Water systems serving fewer than 10,000 people are initially required to monitor for *E. coli* only. Raw water *E. coli* samples must be collected every two weeks for twelve months. Water systems with an average *E. coli* concentration of greater than 100 *E. coli*/100 mL after one year of *E. coli* monitoring will be required to monitor for *Cryptosporidium.* For water systems required to conduct *Cryptosporidium* monitoring, additional treatment may be required depending on your *Cryptosporidium* levels.

Please read and retain the enclosed document which includes very important information. We will be in contact with you shortly to discuss monitoring dates and locations and to provide additional information. If you have any questions, please contact me at (206)-553-2578 or duvil.ricardi@epa.gov

Sincerely,

Ricardi Duvil, Ph.D.
LT2 Rule Manager

Enclosure
cc: Ronald Palmer – Plant Operator
Ladd Folster – Indian Health Service

GUIDANCE FOR LONG TERM 2 ENHANCED SURFACE WATER TREATMENT RULE (LT2) SOURCE WATER MONITORING FOR *E. COLI*

1. Systems must monitor their source (raw) water for *E. coli* at least once every two weeks (**not twice per month**) for 12 months, starting the first or second week of October 2017.

2. Water systems with multiple water sources must monitor all sources (surface water or ground water under the influence of surface water) whenever the source is in use.

3. Monitoring results from the 12 month period will be averaged and then used to determine whether additional monitoring for *Cryptosporidium* is triggered.

4. *Cryptosporidium* monitoring is triggered if the average *E. coli* concentration is 100 *E. coli*/100 mL.

5. If the 100 *E. coli*/100mL trigger level for your water source is exceeded, the Environmental Protection Agency (EPA) will work with you to develop a *Cryptosporidium* monitoring schedule. Sampling for *Cryptosporidium* must begin by April 2019. *Cryptosporidium* sampling is required at least twice/month for one year, or once/month for two years.

6. Systems that do not exceed the 100 *E. coli*/100mL trigger level have no further LT2 requirements.

7. A water system that fails to conduct *E. coli* monitoring at least once every two weeks for 12 months will be required to conduct *Cryptosporidium* monitoring at least twice per month for 12 months or at least monthly for 24 months beginning April 2019.

8. A monitoring violation will be incurred if a sample a) is not collected according to the approved sampling schedule, b) is not collected at the approved sampling location, c) is not analyzed using the appropriate analytical method, d) is not analyzed by a lab certified for *E. coli* enumeration (counting, rather than presence/absence), or e) if *E. coli* results are not reported to EPA no later than 10 days after the end of the first month following the month when the sample is collected

SAMPLING SCHEDULE

- Source water (raw water) *E. coli* samples must be collected at least once every 2 weeks for 12 months.

- EPA will work with you to develop an *E. coli* monitoring schedule. EPA will send you a calendar with the required monitoring dates circled. You must collect your sample on the circled date or within two (2) days before or 2 days after that date. If you cannot collect a sample within this 5 day period due to extreme circumstances such as bad weather, you

must contact EPA to explain why you were unable to collect the sample and to identify a date to collect the make-up sample.

SAMPLING LOCATION

- The sample must be collected before filtration and before the addition of **any** chemicals (like coagulants, disinfectants, oxidants, or corrosion control chemicals).
- The sample must be collected before any filter backwash water is added.
- The *E. coli* sample should be collected from the raw water sample tap(s) identified in your WQMP.
- If you have multiple water sources going to your treatment plant, it is best to take your sample from a tap after they are combined **prior** to treatment. If you cannot do that, you will need to composite samples or analyze each source separately to calculate a weighted average. Please call Ricardi Duvil at (206) 553-2578 if you have questions about doing this.

LABORATORIES TO USE

The laboratory you use must be accredited for *E. coli* **enumeration** (counting) in source water. This is different from the presence/absence test that is typically run. EPA will work with you to determine if the laboratory you usually use is certified for the analysis of *E. coli* under the LT2 Rule.

INFORMATION FOR WHEN YOU START SAMPLING

- Please make at least 26 copies of the enclosed **SAMPLE COLLECTION AND REPORTING FORM**. One of these forms must accompany each *E. coli* sample when it is sent to the lab.
- The sample must be kept between 1° C and 10° C, but not frozen, prior to and during shipment if the sample does not arrive at the lab within two hours of sample collection. Instructions for collecting and shipping samples are included with this document. The sample must be analyzed by the lab within 30 hours of collection.
- When your lab sends you the *E. coli* results you must forward the results to EPA no later than 10 days after the end of the first month following the month when the sample is collected (for example, your October 2017 sample results are due to EPA no later than December 10, 2017; your November 2017 results are due by January 10, 2018, etc.). You may ask your lab to send the results directly to EPA, but final responsibility for submitting *E. coli* results falls to the water system.

- ***E. coli* sample results should be sent to:**

Tribal Drinking Water Program
U.S. Environmental Protection Agency
1200 Sixth Avenue, Suite 900, OWW-193
Seattle, WA 98101

Additional Information

Detailed information pertaining to the source water monitoring requirements can be found in EPA's "Source Water Monitoring Guidance Manual for Public Water Systems" (EPA 815-R06-005). This manual is available through the Safe Drinking Water Hotline (1-800-426-4791) or online at http://www.epa.gov/safewater/disinfection/lt2/compliance.html

2017

January

Su	M	T	W	Th	F	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

February

Su	M	T	W	Th	F	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

March

Su	M	T	W	Th	F	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

April

Su	M	T	W	Th	F	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

May

Su	M	T	W	Th	F	Sa
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7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

June

Su	M	T	W	Th	F	Sa
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4	5	6	7	8	9	10
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18	19	20	21	22	23	24
25	26	27	28	29	30	

July

Su	M	T	W	Th	F	Sa
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16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

August

Su	M	T	W	Th	F	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

September

Su	M	T	W	Th	F	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

October

Su	M	T	W	Th	F	Sa
1	2	3	(4)	5	6	7
8	9	10	11	12	13	14
15	16	17	(18)	19	20	21
22	23	24	25	26	27	28
29	30	31				

November

Su	M	T	W	Th	F	Sa
			(1)	2	3	4
5	6	7	8	9	10	11
12	13	14	(15)	16	17	18
19	20	21	22	23	24	25
26	27	28	(29)	30		

December

Su	M	T	W	Th	F	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	(13)	14	15	16
17	18	19	20	21	22	23
24	25	26	(27)	28	29	30
31						

2018

January

S	M	T	W	Th	F	Sa
	1	2	3	4	5	6
7	8	9	(10)	11	12	13
14	15	16	17	18	19	20
21	22	23	(24)	25	26	27
28	29	30	31			

February

S	M	T	W	Th	F	Sa
				1	2	3
4	5	6	(7)	8	9	10
11	12	13	14	15	16	17
18	19	20	(21)	22	23	24
25	26	27	28			

March

S	M	T	W	Th	F	Sa
				1	2	3
4	5	6	(7)	8	9	10
11	12	13	14	15	16	17
18	19	20	(21)	22	23	24
25	26	27	28	29	30	31

April

S	M	T	W	Th	F	Sa
1	2	3	(4)	5	6	7
8	9	10	11	12	13	14
15	16	17	(18)	19	20	21
22	23	24	25	26	27	28
29	30					

May

S	M	T	W	Th	F	Sa
		1	(2)	3	4	5
6	7	8	9	10	11	12
13	14	15	(16)	17	18	19
20	21	22	23	24	25	26
27	28	29	(30)	31		

June

S	M	T	W	Th	F	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	(13)	14	15	16
17	18	19	20	21	22	23
24	25	26	(27)	28	29	30

July

S	M	T	W	Th	F	Sa
1	2	3	4	5	6	7
8	9	10	(11)	12	13	14
15	16	17	18	19	20	21
22	23	24	(25)	26	27	28
29	30	31				

August

S	M	T	W	Th	F	Sa
			1	2	3	4
5	6	7	(8)	9	10	11
12	13	14	15	16	17	18
19	20	21	(22)	23	24	25
26	27	28	29	30	31	

September

S	M	T	W	Th	F	Sa
						1
2	3	4	(5)	6	7	8
9	10	11	12	13	14	15
16	17	18	(19)	20	21	22
23	24	25	26	27	28	29
30						

October

S	M	T	W	Th	F	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

November

S	M	T	W	Th	F	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

December

S	M	T	W	Th	F	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Instructions for SWTRs Turbidity Exceedance Notice

Template on Reverse

Since surface water treatment filtration treatment technique violations require Tier 2 notification, you must provide public notice to persons served as soon as practical but within 30 days after you learn of the violation [40 CFR 141.203(b)]. This template may also be adapted for use with turbidity MCL violations. Your primacy agency may have more stringent requirements for treatment technique violations (e.g., it may require you to provide water from an alternate source). Check with your agency to make sure you meet all requirements. In addition:

For Exceedances of Single Turbidity Limits	For Exceedances of Monthly Turbidity Limits
You must consult with your primacy agency as soon as practical but within 24 hours of learning of the violation. During the consultation, the agency may choose to elevate your turbidity exceedance to Tier 1. If consultation does not occur, the violation is automatically elevated to Tier 1 (use Template 1-7). For a Tier 2 notice, describe your violation as follows in the second paragraph of the notice: "Normal turbidity levels at our plant are [number] turbidity units. A water sample taken [date] showed levels of [number] turbidity units. This was above the standard of [standard] units. Because of these high levels of turbidity, there is an increased chance that the water may contain disease-causing organisms."	**Use the following language to describe your violation and insert into the second paragraph of the template:** **"Water samples for [month] showed that [percentage] percent of turbidity measurements were over [standard] turbidity units – the standard is that no more than 5 percent of samples may exceed [standard] turbidity units per month. The turbidity levels are relatively low. However, their persistence is a concern. Normal turbidity levels at our plant are [number] units."**

Community systems must use one of the following methods [40 CFR 141.203(c)]:

- Hand or direct delivery
- Mail, as a separate notice or included with the bill

Noncommunity systems must use one of the following methods [40 CFR 141.203(c)]:

- Posting in conspicuous locations
- Hand delivery
- Mail

In addition, both community and noncommunity systems must use *another* method reasonably calculated to reach others if they would not be reached by the first method [40 CFR 141.203(c)]. Such methods could include newspapers, e-mail, or delivery to community organizations. If you mail, post, or hand deliver, print your notice on your system's letterhead, if available.

The notice on the reverse is appropriate for mailing, posting, or hand delivery. If you modify this notice, you must still include all required PN elements from 40 CFR 141.205(a) and leave the mandatory language unchanged (see below).

Mandatory Language

Mandatory language on health effects (from Appendix B to Subpart Q) must be included as written (with blanks filled in) and is presented in this notice in italics and with an asterisk on either end.

You must also include standard language to encourage the distribution of the public notice to all persons served, where applicable [40 CFR 141.205(d)]. This language is also presented in this notice in italics and with an asterisk on either end.

Corrective Action

In your notice, describe corrective actions you are taking. Listed below are some steps commonly taken by water systems with filtration treatment technique violations. Depending on the corrective action you are taking, you can use one or more of the following statements, if appropriate, or develop your own text:

- We added chemicals that reduce turbidity.
- We sampled both untreated and treated water for the presence of coliform bacteria.
- We monitored chlorine levels and adjusted them as needed to compensate for the filtration problems.
- We inspected and cleaned the filters.

After Issuing the Notice

Make sure to send your primacy agency a copy of each type of notice and a certification that you have met the public notice requirements within ten days after you issued the notice [40 CFR 141.31(d)].

SWTRs Turbidity Exceedance Notice

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Warm Springs Water System PWS ID# 104101247
Did Not Meet Treatment Requirements-Turbidity

Our water system recently violated a drinking water requirement. Although this was not an emergency, as our customers, you have a right to know what happened, what you should do, and what we did (are doing) to correct this situation.

We routinely monitor your water for turbidity (cloudiness). This tells us whether we are effectively filtering the water supply. [**Insert appropriate description of the violation from instructions on the previous page.]**

What should I do?

- There is nothing you need to do. You do not need to boil your water or take other actions. We do not know of any contamination, and none of our testing has shown disease-causing organisms in the drinking water.
- If you have a severely compromised immune system, have an infant, are pregnant, or are elderly, you may be at increased risk and should seek advice from your health care providers about drinking this water. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1-800-426-4791.

What does this mean?

This is not an emergency. If it had been, you would have been notified within 24 hours. **Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.** These symptoms are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice.

What is being done?

[**Describe the corrective actions and when the system returned or expects to return to compliance.]**

For more information, please contact [name of contact] at [phone number] or [mailing address].

> **Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.**

This notice is being sent to you by **[system].** Water System ID#: _____.
Date distributed: _____.

PUBLIC NOTICE CERTIFICATION FORM

PUBLIC WATER SYSTEM NAME Warm Springs Community Water System

PUBLIC WATER SYSTEM ID 104101247

DESCRIPTION OF VIOLATION(S) TURBIDITY EXCEEDANCE

VIOLATION DATE(S) November 19, 2018

The public water system named above hereby affirms that public notice has been provided to consumers in accordance with the delivery, content, and format requirements and deadlines as required by 40 CFR Part 141 Subpart Q.

☐ Consultation with EPA (if required) on the following date(s)_____

☐ Notice distributed by the following method(s) (for example, mail, posting, etc. _____

_____

on the following date(s)_____

☐ Notice posted at the following location(s) _____

_____

on the following date(s)_____

_____ _____

Signature of owner or operator date

****

Send completed form and copy of public notice to EPA by

fax to (206) 553-1280 or

mail to Drinking Water Unit
Environmental Protection Agency
1200 Sixth Ave, Suite 155, OWW-193
Seattle, WA 98101-3123

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
WATER AND WATERSHEDS

September 27, 2013

Don Courtney, General Manager
Public Utilities Branch
Confederated Tribes of Warm Springs
P.O. Box 1196
Warm Springs, Oregon 97761

Re: New monitoring requirements
Warm Springs Water Treatment Plant PWS ID# 104101247

Dear Mr. Courtney:

On August 4, 2011, Ladd Folster sent you an updated Water Quality Monitoring Program (WQMP) for the Warm Springs, Simnasho-Schoolie and Sidwalter community water systems. As you know, a WQMP identifies sampling requirements and identifies sites where these samples must be collected. I am writing to you today to relay some new sampling requirements for the Warm Springs Water Treatment Plant water system that go into effect this year and therefore do not appear in the current WQMP.

The current WQMP includes a TTHM and HAA5 monitoring requirement with samples to be collected every quarter at site WS-10. This requirement comes from a regulation called the Stage 1 Disinfectant and Disinfection Byproducts Rule. A more recent rule, called the Stage 2 Disinfectant and Disinfection Byproducts Rule (Stage 2 DBPR) modifies the TTHM and HAA5 monitoring requirements for most water systems. Under the Stage 2 DBPR, surface water systems serving 3,301 - 9,999 people will be required to collect TTHM and HAA5 samples from two sample sites once each quarter during a specifically identified month. The enclosed Stage 2 DBPR compliance monitoring plan identifies the Stage 2 DBPR monitoring sites and monitoring dates. The specific sample sites and sample collection dates have been chosen based on monitoring conducted from May 2009 to February 2010 as a part of a Stage 2 DBPR required study called an Initial Distribution System Evaluation or IDSE. Stage 2 DBPR TTHM and HAA5 compliance monitoring begins November of this year at sites WS-10 and WS-42 and TTHM and HAA5 samples must be collected every February, May, August and November after that.

The other monitoring requirement new to the Warm Springs Water Treatment Plant is a monitoring requirement for disinfection byproduct precursors. All surface water systems using conventional filtration treatment must monitor each treatment plant for total organic carbon (TOC) no later than the point of combined filter effluent turbidity monitoring (site WS-02). At the same time this treated water TOC sample is collected, source water TOC and alkalinity samples must also be collected (from site WS-01). These three samples must be collected each month at a time representative of normal operating conditions and influent water quality. (See enclosed monitoring schedule.) The purpose of this monitoring is to determine if the Warm Springs Water Treatment Plant will need to provide enhanced coagulation to control disinfection

precursors. That determination will be made after a year's worth of TOC and alkalinity monitoring. As long as a system's source water TOC and/or the system's treated water TOC levels are less than 2.0 mg/L calculated quarterly as a running annual average, enhanced coagulation will not be required. Systems with an average treated water TOC of less than 2.0 mg/L for two consecutive years, or less than 1.0 mg/L for one year may reduce treated water TOC and source water TOC and alkalinity monitoring from monthly to quarterly. TOC samples must be sent to an accredited laboratory for analysis. Alkalinity sample analysis can be conducted in-house if you have the necessary equipment, otherwise these samples should also be sent to an accredited laboratory. TOC and alkalinity monitoring results should be sent to the Environmental Protection Agency each month.

If you have any questions regarding this letter, please contact Lisa Jacbosen at (206) 553-6917 or jacobsen.lisa@epa.gov or Wendy Marshall at (206) 553-1890 or marshall.wendy@epa.gov.

Sincerely,

for

Marie Jennings, Manager
Drinking Water Unit

Enclosures (2)

cc: Roy Spino, Water/Wastewater Engineer, Warm Springs Tribal Utilities
Steve Courtney, Lead Water Operator, Warm Springs Tribal Utilities
Ladd Folster – Indian Health Service, Tribal Utility Consultant

Stage 2 Disinfectants and Disinfection Byproducts Rule Compliance Monitoring Plan

Warm Springs Water Treatment Plant

PWS ID # 104101247

Constituent	Site #	Frequency	Next Sample
TTHM & HAA5 (disinfection byproducts) (40 CFR §141 subpart V)	WS-10	February, May, August, and November of each year	November 2013
	WS-42	February, May, August, and November of each year	November 2013

Disinfection Byproduct Precursors Monitoring Plan

Warm Springs Water Treatment Plant

PWS ID # 104101247

Constituent	Site #	Frequency	Next Sample
TOC	WS-01	Monthly	October 2013
	WS-02	Monthly	October 2013
Alkalinity	WS-01	Monthly	October 2013

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
WATER AND WATERSHEDS

November 12, 2014

Roy Spino
Water/Wastewater Engineer
Utilities Department
Confederated Tribes of Warm Springs
P.O. Box 1196
Warm Springs, Oregon 97761

Re: Reduced monitoring requirements for Total Organic Carbon and Alkalinity
Warm Springs Water Treatment Plant PWS ID# 104101247

Dear Mr. Spino:

Since October of 2013, the Warm Springs Water Treatment Plant has been collecting raw water and finished water Total Organic Carbon (TOC) samples and raw water alkalinity samples each month and reporting the results to the Environmental Protection Agency (EPA). Based on the fact that the average finished water TOC has been less than 1.0 mg/L for the past year we are now able to reduce the TOC and alkalinity monitoring requirements from monthly to quarterly.

As we have already received sample results for the October – December 2014 quarter, the next quarterly samples are not due until the first quarter of 2015. TOC and alkalinity samples should be collected as follows:

Constituent	Site #	Frequency	Next Sample Due
TOC	WS-01	Quarterly	January – March 2015
	WS-02	Quarterly	January – March 2015
Alkalinity	WS-01	Quarterly	January – March 2015

TOC and alkalinity results must be reported to EPA within 10 days after the end of each quarter.

If you have any questions regarding this letter, please contact me at (206) 553-1890 or marshall.wendy@epa.gov.

Sincerely,

Wendy Marshall

Wendy Marshall
Environmental Scientist

cc: Steve Courtney, Lead Water Operator
Ronald Palmer, Operator
James Earl – Indian Health Service, Tribal Utility Consultant

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
WATER AND WATERSHEDS

February 7, 2014

Steve Courtney, Chief Operator
Warm Springs Water Treatment Plant
Utilities Department
Confederated Tribes of Warm Springs
P.O. Box 1196
Warm Springs, Oregon 97761

Re: Reporting forms
Warm Springs Water Treatment Plant PWS ID# 104101247

Dear Mr. Courtney:

The purpose of this letter is to send you a revised Monthly Operator Report (MOR) form and a new "24-hour notification form". Both forms are being provided so that you can better meet the reporting requirements of the Surface Water Treatment Rule (SWTR).

According to the SWTR, if at any time the disinfectant residual falls below 0.2 mg/L in the water entering the distribution system, the water system must contact the Environmental Protection Agency as soon as possible but no later than by the end of the next business day. You must also notify us by the end of the next business day whether or not the residual was restored to at least 0.2 mg/L within 4 hours. While this reporting requirement was included in the MOR instruction form that was provided to you along with the original MOR form, the MOR form did not include this specific reporting element.

The second page of the MOR form now asks you to list all days where the point-of-entry (POE) disinfectant residual was less than 0.2 mg/L, instead of just the days where the POE residual was less than 0.2 mg/L for more than four hours. This is the only change to the MOR form. Please use the enclosed revised MOR form instead of the form that you had been using in the past.

If at any time the combined filter effluent turbidity exceeds 1 NTU you are also required to consult with EPA as soon as practical but no later than 24 hours after you become aware of the exceedance. You are also required to report this information on the MOR form. This reporting requirement is included on page 2 of the MOR and no revisions to the form were needed.

To make it easier for you to contact us within 24 hours of a low (below 0.2 mg/L) POE disinfectant residual or a turbidity exceedance, we are providing you with a "24-hour notification form" that you can fax or email to us. If we have any questions after receiving the form, we would then contact you. The form also lists other treatment objective failures or equipment failures that we should be notified about. Please also continue to contact Ladd Folster in the event of any treatment or equipment failure.

In addition to sending you hard copies of these forms, we will also send you copies of these forms in pdf format via email. The 24 hour notification form can be filled in by hand and faxed to us or filled in electronically and emailed to us. We will also email a copy of the MOR form in Excel format in case you want to complete the MOR electronically. Please continue to mail and/or fax the MOR to us. It cannot be sent to us via email. Please make sure to keep copies of any documents that you send to us.

If you prefer to conduct the 24-hour notification by phone, please call me at (206) 553-6917 or Wendy Marshall at (206) 553-1890. If you prefer to fax the information, please include both Wendy's name and my name on the fax cover sheet and fax it to (206) 553-1280. If you prefer to send the form via email, please send it to both Wendy and me at marshall.wendy@epa.gov and jacobsen.lisa@epa.gov.

If you have any questions, please feel free to contact me or Wendy at the phone numbers or email addresses shown above. If you have any difficulty filling out these forms, please contact Ladd, Wendy or me.

Sincerely,

Lisa Jacobsen
Tribal Drinking Water Coordinator

Enclosures (2)

cc: Roy Spino, Water/Wastewater Engineer, Warm Springs Tribal Utilities
Ladd Folster – Indian Health Service, Tribal Utility Consultant

Water Treatment System EPA Notification of Failure to Meet Treatment Objectives and/or Equipment Failures

System Name: Warm Springs PWSID: 104101247

Nature of Failure (treatment objectives, equipment or both): _____

Time and Date of Failure(s) or When Noticed: Date: _____ Time: _____

□ Failure to meet Treatment Objectives

□ Turbidity > 1 NTU □ Entry Point Cl <0.2 mg/l □ Discovery of Waterborne Disease Outbreak □ CT in WSTs insufficient □ Other-_____

□ Failure of process equipment

□ Turbidimeters □ Chlorine Analyzer □ Coagulant System

□ Filter Breakthrough/Mud Balls □Backwash/Air Scour Equipment

□ SCADA/Process Recording □ Power Related □ Pumps

□ Other-_____

Brief explanation of failure, actions taken and when (actual or est.) back in compliance:

Please write clearly in a dark pen or type here

Name _____

FAX or email this form to your EPA Representative ASAP and contact your TUC.

EPA fax number: (206) 553-1280 jacobsen.lisa@epa.gov and marshall.wendy@epa.gov

SURFACE WATER TREATMENT RULES MONTHLY REPORTING FORM FOR COMBINED FILTER EFFLUENT (CFE) TURBIDITY
(Due to EPA by 10th day of the following month)

Month _____ Year _____ PWS ID# 104101247 Water System Name: Warm Springs Water Treatment Plant

CFE TURBIDITY MUST BE REPORTED EVERY 4 HOURS. FILL IN THE TIME CFE TURBIDITY IS MEASURED IN THE TABLE BELOW

IF PLANT IS OFF AT THE TIME OF THE REQUIRED 4-HOUR READING, INDICATE "PO" IN THE APPROPRIATE BOX

** THE DAILY MAXIMUM TURBIDITY VALUE REPORTED IN THE LAST COLUMN OF THE TABLE BELOW, FOR A PARTICULAR DATE, SHOULD BE THE HIGHEST OF THE TURBIDITY VALUES REPORTED ON THIS PAGE FOR THAT PARTICULAR DATE

DO NOT REPORT RESULTS COLLECTED DURING BACKWASH, FILTER-TO-WASTE, OR ANY TIME WATER IS NOT BEING PRODUCED FOR CONSUMPTION

**IF THE MAXIMUM TURBIDITY LEVEL EXCEEDS 1.49 NTU ON ANY DAY, CONTACT LISA JACOBSEN (EPA) AT (206) 553-6917 AS SOON AS POSSIBLE BUT NO LATER THAN 24 HOURS AFTER THE EXCEEDANCE

Date	Time -	Time -	Time -	Time -	Time -	Time -	**DAILY Max NTU
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							

A.Total number of reported Combined Filter Effluent (CFE) turbidity measurements = _____

B. Total Number of reported CFE turbidity measurements that are less than or equal to 0.3 NTU = _____

C. DATE OF LAST CALIBRATION OF CFE TURBIDIMETER: _____

Operator Signature _____ Date Submitted _____

SURFACE WATER TREATMENT RULES MONTHLY COMPLIANCE DETERMINATION REPORT

(Due to EPA by 10th day of the following month)

Month _____ System Name - **Warm Springs Water Treatment Plant** PWS ID **104101247**

Year _____ Type of Filtration - Conventional

Combined Filter Effluent Turbidity Performance Criteria

A. Total number of Combined Filter Effluent (CFE) turbidity measurements (from page 1) = ____

B. Total Number of CFE turbidity measurements that are less than or equal to **0.3** NTU (from page 1) = ____

C. The percentage of CFE turbidity measurements meeting 0.3 NTU = B / A * 100 = _____ ____ %

D. Is number in C less than 95%? ☐ yes ☐ No

E. Record the date and turbidity value for any CFE measurements exceeding 1.49 NTU below: If none, enter "none":

Note: A system is in violation if the answer to "D" is "yes".

Time and Date of Exceedance	Turbidity (NTU) value(s) > 1.49	Time and Date EPA Was Notified

Disinfection Performance Criteria

A. Point-of-Entry (POE) Minimum Disinfectant Residual Criteria

The minimum residual concentration, measured as free chlorine must not drop below **0.2** mg/L (or a higher value if advised by EPA) for adequate inactivation of Giardia and viruses.

Date	Minimum Disinfectant Residual at Point of Entry to Distribution System (mg/L)	Date	Minimum Disinfectant Residual at Point of Entry to Distribution System (mg/L)	Date	Minimum Disinfectant Residual at Point of Entry to Distribution System (mg/L)
1		11		21	
2		12		22	
3		13		23	
4		14		24	
5		15		25	
6		16		26	
7		17		27	
8		18		28	
9		19		29	
10		20		30	
31					

Days where the POE Residual was less than 0.2 mg/L		
Time/Day	Duration of Low Level (indicate hrs)	Time and Date Reported to EPA

B. Distribution System Disinfectant Residual Criteria MEASURED WHEN TAKING TOTAL COLIFORM SAMPLES

A = # of times during the month a disinfectant residual measurement was taken in the distribution system = ____

C = # of distribution system samples this month that disinfectant residual was NOT detected = ____

V = C / A * 100 = ____ % For the previous month, V = _____%

Note: A system is in violation if the residual disinfectant concentration is undetectable in more than 5 percent of the samples each month, for any two consecutive months that the system serves water to the public

Operator Initials _____ Date _____

INDIVIDUAL FILTER EFFLUENT (IFE) MONITORING REPORT

(Due to EPA by 10th day of the following month)

Summary of Individual Filter Effluent Monitoring Results for _____ (month/year)

1. Was continuous monitoring of the Individual Filter Effluent (IFE) turbidity conducted during the month?

No ☐ Yes ☐

2. Was the IFE turbidity recorded at least every 15 minutes?[1]

No ☐ Yes ☐

3. Was there a failure of the IFE's continuous monitoring equipment?[2]

No ☐ Yes ☐

4. Was the IFE turbidity for any filter greater than 1.0 NTU in two consecutive 15 minute readings?

No ☐ Yes ☐

If yes, submit the Turbidity Exceedance Report Form (page 4) with this monthly report.

5. Was the IFE turbidity for the same filter greater than 1.0 NTU in 2 consecutive 15 minute readings during the past 3 consecutive months?[3]

No ☐ Yes ☐

If yes, call Lisa Jacobsen at (206) 553-6917 for Filter Self-Assessment instructions

If yes, enter date Individual Filter Self-Assessment was triggered: ☐

If yes, enter date Individual Filter Self-Assessment was completed: ☐

6. Was the IFE turbidity of the same individual filter greater than 2.0 NTUs in 2 consecutive 15 minute readings during the past 2 consecutive months?

No ☐ Yes ☐

If yes, call Lisa Jacobsen at (206) 553-6917 to arrange for a Comprehensive Performance Evaluation and answer question #7

7. If the answer to #6 above is "Yes", a Comprehensive Performance Evaluation (CPE) must be arranged within 60 days and it must be completed within 120 days of the CPE trigger. Has CPE been arranged?

No ☐ Yes ☐

Indicate the date the CPE was triggered: ☐

Indicate the scheduled CPE date: ☐

[1]Individual Filter Effluent continuous monitoring results do not need to be submitted to EPA each month. The 15 minute recordings must be kept on-site for 3 years and available during site visits and sanitary surveys.

[2]If there is a failure of the continuous monitoring equipment, systems may take grab samples of the IFE turbidity every four hours in lieu of continuous monitoring. Failure to resume continuous monitoring of IFE turbidity within 14 days is a treatment technique violation.

[3]Filter Self Assessment reports must be kept on-site for 3 years.

Operator Initials _____ Date _____

INDIVIDUAL FILTER EFFLUENT (IFE) PERFORMANCE TURBIDITY EXCEEDANCE REPORT

Did any filter exceed 1.0 NTU in 2 consecutive 15 minute readings? Yes _____ No _____ If "Yes" - complete the rest of this form. If "No" - no additional information for this form is required, but form must still be submitted. Form is due to EPA by 10th day of the following month.

Filter #:					
Date Exceedance Occurred:					
Time Occurred:					
Duration of Exceedance:					
Highest Turbidity Level (NTUs):					
Is reason for exceedance known?					
Reason for each exceedance, if known *(select all that apply)*:					
Filter Problems					
Post-Backwash Turbidity Spike					
Prolonged Filter Run Time					
Excessive Filter-Loading Rate					
Rate-of-Flow Control Valve Failure					
Media Defects (Insufficient depth, mud balls, etc.)					
Inadequate Surface Wash or Backwash Facilities					
Turbidimeter Errors					
Incorrect Calibration					
Air Bubble					
Debris					
Backwash Artifact					
Chemical Feed Equipment Failure					
Coagulant					
Coagulant Aid					
Filter Aid					
Raw Water Quality					
Raw Water Turbidity Unusually High					
Other Major Treatment Process Failures or Maintenance Activities (provide details below)					
Did the same filter have an exceedance last month?					

Comments:

(If more than one exceedance occurred during the month, include filter #, date and time with each comment.)

Operator Initials _____ Date _____

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
WATER AND WATERSHEDS

September 30, 2013

Don Courtney, General Manager
Public Utilities Branch
Confederated Tribes of Warm Springs
P.O. Box 1196
Warm Springs, Oregon 97761

Re: Surface Water Treatment Rule Non-compliance
Warm Springs Water Treatment Plant PWS ID# 104101247

Dear Mr. Courtney:

On April 17, 2013, I sent a letter to Roy Spino (enclosed) pertaining to certain actions that needed to be addressed to bring the Warm Springs Water Treatment Plant into compliance with the National Primary Drinking Water Regulations' Surface Water Treatment Rule (SWTR). The letter identified the need for a turbidimeter to measure combined filter effluent (CFE) turbidity and the need for continuous monitoring of the residual disinfectant concentration of the water entering the distribution system no later than August 1, 2013. During the week of August 19, 2013, Ladd Folster with the Indian Health Service installed a CFE turbidimeter, so the Warm Springs Water Treatment Plant is in compliance with this aspect of the SWTR. While Ladd attempted to repair the Hach CL-17 chlorine analyzer on numerous occasions, it is my understanding that the chlorine analyzer is not working reliably and therefore the Warm Springs Water Treatment Plant is out of compliance with the requirement for continuous chlorine residual monitoring.

As a reminder, the SWTR requires the residual disinfectant concentration of the water entering the distribution system to be monitored continuously if a water system serves more than 3,300 persons, and the lowest value must be recorded each day. If there is a failure in the continuous monitoring equipment, grab sampling every 4 hours may be conducted in lieu of continuous monitoring, but for no more than 5 working days following the failure of the equipment. Because your Hach CL-17 chlorine analyzer cannot be repaired in a way that can continuously provide reliable data, it must be replaced. A working and reliable chlorine analyzer must be installed no later than January 1, 2014. If installation does not occur by that date and you do not begin reporting the daily lowest entry point chlorine residual level based on continuous monitoring one month following installation, the Warm Springs Water Treatment Plant will be in violation of the SWTR and enforcement action will be considered. Ladd is available to assist your utility and specify what is needed for your particular needs and can assist with the installation of the new analyzer.

We appreciate how hard everyone is working to bring the Warm Springs Water Treatment Plant into compliance with the SWTR and appreciate everyone's efforts to maintain compliance with

the other requirements of the National Primary Drinking Water Regulations. If you have any questions regarding this letter, please contact Lisa Jacbosen at (206) 553-6917 or jacobsen.lisa@epa.gov or Wendy Marshall at (206) 553-1890 or marshall.wendy@epa.gov.

Sincerely,

Marie Jennings, Manager
Drinking Water Unit

Enclosure

cc: Roy Spino, Water/Wastewater Engineer, Warm Springs Tribal Utilities
Steve Courtney, Lead Water Operator, Warm Springs Tribal Utilities
Ladd Folster – Indian Health Service, Tribal Utility Consultant

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
WATER AND WATERSHEDS

April 17, 2013

Mr. Roy Spino
Water/Wastewater Engineer
Utilities Department
Confederated Tribes of Warm Springs
P.O. Box 1196
Warm Springs, Oregon 97761

Re: Coming into compliance with the Surface Water Treatment Rules
Warm Springs Water Treatment Plant - PWS ID# 104101247

Dear Mr. Spino:

The National Primary Drinking Water Regulations (NPDWR) include a number of requirements that are specific to water systems with surface water sources. The purpose of this letter is to inform you that the Warm Springs Water Treatment Plant is out of compliance with certain treatment technique, monitoring and reporting requirements, which will be described below.

The NPDWR's Surface Water Treatment Rule (SWTR) seeks to prevent waterborne diseases caused by viruses, *Giardia lamblia*, and other microbial pathogens. These disease-causing microbes are present at varying concentrations in most surface waters. This rule requires that water systems filter and disinfect water from surface water sources to reduce the occurrence of unsafe levels of these microbes.

More specifically, the SWTR requires a 3-log (99.9%) removal /inactivation (through filtration and disinfection respectively) of *Giardia lamblia*, and a 4-log (99.99%) removal/inactivation of viruses, while a more recent regulation, the Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR) requires a 2-log (99%) removal of *Cryptosporidium*. The SWTR also includes specific disinfectant residual treatment technique and monitoring and reporting requirements and the LT1ESWTR also includes strengthened combined filter effluent turbidity limits, specific combined filter effluent turbidity monitoring and reporting requirements, and specific individual filter effluent turbidity monitoring, reporting and follow-up action requirements.

A well run conventional treatment plant is assumed to achieve a 2-log removal of *Cryptosporidium*, 2.5-log removal of *Giardia lamblia*, and 2-log removal of viruses in the filtration process and then needs to achieve 0.5-log inactivation of *Giardia lamblia* and 2-log inactivation of viruses both with disinfection to meet the required total log reductions.

The conditions described in the letter that Laddie Folster sent to you on March 11, 2013 (enclosed), suggest that the Warm Springs Water Treatment Plant is not in compliance with the requirements of the SWTR and LT1ESWTR described above and will not be able to come into compliance unless a number of changes, both in the short-term and the long-term, are made. A number of these changes are already provided in the March 11, 2013, letter and other required changes will be identified as a result of the pilot study to be conducted at your plant.

One of the more immediate regulatory needs is for the installation of a combined filter effluent (CFE) turbidimeter. CFE turbidity monitoring is required every four hours the plant is operating and must be reported to the Environmental Protection Agency (EPA) every month. Averaging of the four individual filter effluent turbidimeters to come up with the CFE turbidity is not allowed unless each of the filters always produce the same amount of water and are all operated exactly the same.

The CFE turbidimeter must be installed no later than August 1, 2013. If installation does not occur by that date and you do not begin reporting to EPA the required CFE turbidity monitoring results one month following installation, the Warm Springs Water Treatment Plant will be in violation of the LT1ESWTR.

The SWTR requires the residual disinfectant concentration of the water entering the distribution system to be monitored continuously if a water system serves more than 3,300 persons, and the lowest value must be recorded each day. If there is a failure in the continuous monitoring equipment, grab sampling every 4 hours may be conducted in lieu of continuous monitoring, but for no more than 5 working days following the failure of the equipment. Unless continuous monitoring equipment has been recently installed, the Warm Springs Treatment Plant is in violation of this SWTR requirement. A working chlorine analyzer must be installed no later than August 1, 2013. If installation does not occur by that date and you do not begin reporting the daily lowest entry point chlorine residual level based on continuous monitoring one month following installation, the Warm Springs Water Treatment Plant will be in violation of the LT1ESWTR.

It is important for you to work with Ladd to make the corrections he has already identified and additional corrections that will be identified as a result of the pilot study. Ladd can work with you to address the two immediate needs identified above (CFE turbidimeter and repair of the CL-17 chlorine analyzer) as well as the repair of the Streaming Current Monitor.

As mentioned above, there are a number of required SWTR and LT1ESWTR monitoring and reporting requirements. On a future visit, Ladd will provide you with a copy of EPA's monthly operator report, which you must complete and send to EPA by the 10th of each month.

If you have any questions, please contact Lisa Jacobsen at (206) 553-6917 or jacobsen.lisa@epa.gov or Wendy Marshall at (206) 553-1890 or marshall.wendy@epa.gov.

Sincerely,

Marie Jennings, Manager
Drinking Water Unit

Enclosure

cc: Mr. Ladd Folster – Indian Health Service Tribal Utility Consultant

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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Seattle, WA 98101-3123

OFFICE OF
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November 13, 2018

Travis Wells, General Manager
Warm Springs Water Treatment Plant
Confederated Tribes of Warm Springs
P.O. Box 1196
Warm Springs, Oregon 97761

Re: Boil Water Notice Issued on November 5, 2018
Warm Springs Water Treatment Plant PWS ID# 104101247

Dear Mr. Wells:

We recently reviewed the Warm Springs Water Treatment Plant's (WSWTP) bacteriological results for total coliform and E. coli, along with chlorine residual levels sampled on November 8, 2018. We also reviewed the WSWTP's completion report for the repair due to loss of pressure event that occurred on Sunday, November 4, 2018. As you are aware, a boil water notice is currently in effect to protect public health.

Based on information provided by the WSWTP on November 11, 2018, our review showed, after the main line repair was completed, sampling results indicate that both total coliform and E. coli were absent and free chlorine residual levels have returned to baseline levels. As a result, EPA is comfortable with the WSWTP lifting the boil water notice.

If you have any questions, please contact Ricardi Duvil, Ph.D., P.E., Surface Water Rule Manager, at (206) 553-2578 or duvil.ricardi@epa.gov. We appreciate your efforts to protect the health of the customers of your drinking water system.

Sincerely,

Marie Jennings
Drinking Water Unit Manager

Cc: Alyssa Macy, Chief Operations Officer

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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Seattle, WA 98101-3123

OFFICE OF
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CERTIFIED MAIL-RETURN RECEIPT REQUESTED

December 20, 2018

Travis Wells, General Manager
Warm Springs Water Treatment Plant
Confederated Tribes of Warm Springs
P.O. Box 1196
Warm Springs, Oregon 97761

Re Response to EPA's November 28, 2018 Letter re: Immediate Public Health Concerns and Significant Deficiencies at the Warm Springs Water Treatment Plant PWS ID# 104101247

Dear Mr. Wells:

Thank you for your response by email on December 6, 2018. We have received your report regarding how the Confederated Tribes of Warm Springs (CTWS or Tribe) intends to address the most immediate public health concerns discussed in our letter dated November 28, 2018. We appreciate your collaboration with Indian Health Service's (IHS's) tribal utility consultant, Laddie Folster, in addressing some of the most immediate threats to public health. Additionally, EPA appreciates your commitment to resolve the overall list of significant deficiencies outlined in the July 2018 Sanitary Survey and discussed in EPA's November 28, 2018, letter to CTWS. After a careful review of your response to EPA's November 28, 2018 letter, we are still concerned and seek further clarification regarding the actions the Tribe will take and timeline of when each item will occur at the Warm Springs Water Treatment Plant (WSWTP). The EPA wants to again urge the CTWS to immediately address the following concerns because these issues, if left unaddressed, have the potential to impair water quality and seriously jeopardize public health, not to mention, violate the Safe Drinking Water Act (SDWA).

Your email response on December 6, 2018, to EPA's letter dated November 28, 2018, did not discuss specific actions CTWS planned to take with an associated timeline for these actions. Your email response references work performed by IHS that would lead to a Trip Report addressing the immediate public health concerns raised by EPA. You forwarded this IHS Trip Report to EPA on December 10, 2018. After reviewing your response on December 6, 2018, with the benefit of the IHS Trip Report received on December 10, 2018, EPA requests a formal written response addressing the following remaining concerns and EPA recommendations:

Immediate Public Health Concerns

1. **No later than January 18, 2019**, recalibrate or replace the turbidimeter at Individual Filter Effluent # 2 (IFE #2). Under the Surface Water Treatment Rule (SWTR), IFE must be monitored continuously for turbidity using an approved method. The procedure for calibrating turbidity

meters established in Method 214A of the 17th edition of Standard Methods requires monthly calibration of turbidity meters. According to EPA's 1991 *Guidance Manual for Compliance with the Filtration and Disinfection Requirements for Public Water Systems Using Surface Water Source,* it is recommended that the calibration of continuous turbidity monitors are verified at least twice per week when using procedures established in Method 214A. Per your request on December 6, 2018 to perform calibration of turbidity meters monthly, at this point, EPA approves your request to calibrate on a monthly frequency. EPA strongly recommends that CTWS maintain calibration logs for every IFE on file.

Regarding the frequency of the turbidity meters readings, CTWS must record the results of every IFE turbidity monitoring every 15 minutes and maintain these results on file. The performance of each individual filter is critical to controlling pathogen breakthrough for public health protection. As you are aware, the combined filter effluent (CFE) is calculated as an average of the IFE turbidities logged. Therefore, it is critically important to know if there is a failure in continuous IFE turbidity monitoring equipment that contributes to the CFE because CTWS must then, in lieu of continuous monitoring, conduct grab sampling every 4 hours as an alternative monitoring technique. Additionally, CTWS must return to monitoring every 15 minutes within five working days following the failure of the continuous monitoring equipment. CTWS's CFE may be inadequate due to poor performance of the individual filter. EPA is willing to have our technical staff, Ricardi Duvil, work closely with IHS and your technical staff to determine the best overall monitoring program for this water system in order to assess the status of the various filter units. Each filter within the CTWS system should be maintained so that each meets the turbidity performance criteria for the CFE. EPA's goal is to assure that the CTWS water system is well-operated and achieves maximum removal efficiencies of Giardia and Cryptosporidium cysts, turbidity, and legionella in order to protect public health.

2. **No later than January 18, 2019,** <u>remove the solids from the settling tanks</u>. Solids build-up, from inches high to multiple feet high, can accumulate at the bottom of settling tanks, especially flat-bottomed, rectangular tanks like the ones present at the CTWS's WSWTP at issue. The accumulation of solids may then develop a suitable environment for bacteria and other pathogens to thrive causing a serious threat to public health. Under the SWTR, a well-operated conventional filtration treatment plant is defined under 40 CFR 141.2 as "a series of processes including coagulation, flocculation, sedimentation, and filtration resulting in substantial particulate removal." A well-operated sedimentation process is defined in 40 CFR 141.2 as "a process for removal of solids before filtration by gravity or separation," and it is clearly stated in EPA 's *Guidance Manual Compliance Requirements with Conventional Filtration Systems Using Surface Water Source* that sludge collected in the bottom of the sedimentation basin must be removed to increase the overall treatment processes efficiency and reduce chemical requirements. With respect to public health, EPA recommends all processes from conventional or direct filtration plants must be cleaned and maintained in a sanitary manner to ensure that water does not become contaminated and pose a risk to public health.

   CTWS's December 6, 2018, response indicates solids removal work is planned to be completed in January, subject to obtaining a contract to haul the solids to a landfill, and weather may further delay completion no later than the end of February. Therefore, as we understand it, CTWS is proposing to complete this request in three steps--1) remove the existing solids from the settling tanks using a pump-vacuum system, 2) dry the solids using a drying bed, and 3) hauling the dried solids to a landfill--by the end of February 2019. We approve this timeline for all three steps to

be completed; however, because of the public health concern regarding the existing solids remaining in the tanks, as outline above, ***EPA requests that CTWS remove the existing solids out of the settling tanks (Step 1 above) no later than January 18, 2019.*** EPA recognizes that it may take additional time, as you indicate, to arrange for the drying of the solids (Step 2 above) and the hauling/disposal of the dried solids (Step 3 above), which may take this timeline to the end of February 2019.

Looking forward, EPA also recommends that CTWS develop and implement standard operating procedures (SOPs), with logs showing performance of the SOPs, to ensure the continuous removal of solids into the future.

3. **No later than January 18, 2019,** develop and implement standard operating procedures (SOPs), with logs showing performance of the SOPs, regarding the coagulation process. The development of SOPs regarding the coagulation process is recommended as part of a well-operated conventional filtration treatment plant pursuant to 40 CFR 141.2. IHS's findings and recommendations in its December 10, 2018 Trip Report discusses the unreliability of the Streaming Current Monitoring (SCM) at the WSWTP and recommends regular jar testing to verify SCM's validity and to adjust coagulant when it is known that the SCM is not functioning properly. EPA shares IHS's concerned about SCM's reliability at the WSWTP and feels strongly that CTWS should utilize jar testing as part of the coagulation control and monitoring process. The purpose of the jar test is to determine the optimum alum dose and pH for turbidity and organics removal. The jar test is one of the most important routine tests carried out at a water system employing coagulation and flocculation as part of the treatment process. The jar test results should confirm that the current coagulant dose rate is optimum. Therefore, design dosages of coagulants should be determined using SCM with verification by way of jar testing when the SCM is not operating effectively.

   Additionally, as noted previously, the timing of the addition of coagulants has also been found to be critical to clarification performance, filter performance and, hence, the quality of the final water. Therefore, EPA very strongly recommends that CTWS conduct jar tests for coagulation/flocculation control and monitoring process as well as the keeping of logs containing the SCM/jar test results and the timing/amount of coagulation added to the system. This helps the WSWTP to select the best settings for turbidity and organics removal, observe long-term trends, and, ultimately, ensure maximum protection of public health.

July 2018 Sanitary Survey Significant Deficiencies

As a reminder, CWTS must correct all significant deficiencies outlined in the July 2018 Sanitary Survey and discussed in EPA's letter on November 28, 2018, or submit a Corrective Action Plan (CAP), no later than January 12, 2019. In addition to EPA's immediate public health concerns above, the significant deficiencies outlined in the July 2018 Sanitary Survey have the potential to impair your water quality and jeopardize public health. If you are not able to address significant deficiencies or submit a CAP by this deadline, you will be in violation of the National Primary Drinking Water Regulations (40 CFR §142.16(b)) and must notify EPA immediately with a written explanation describing: 1) the actions taken, 2) the actions CWTS should take, but is unable to take, and 3) the reasons why CWTS is unable to take the actions necessary to correct the significant deficiencies. To

further assist you, we are enclosing a copy of a CAP template designed for CWTS's significant deficiencies, if you determine you will be unable to correct all significant deficiencies or submit a CAP to EPA by the January 12, 2019, deadline.

Please send proof of significant deficiency corrections, or a CAP, and other written submissions regarding significant deficiencies in the July 2018 Sanitary Survey to Ricardi Duvil at duvil.ricardi@epa.gov. If you have any questions or would like to discuss the findings of the Sanitary Survey, please contact Ricardi at 206.553.2578. EPA reserves the right to use available enforcement authority under the Safe Drinking Water Act to ensure protection of public health.

We appreciate the Tribe's cooperation and timely response to the above requests.

Sincerely,

Marie Jennings
Drinking Water Unit Manager

Enclosure: Example "Corrective Action Plan"

Cc: Honorable Chairman Austin Greene, Jr., Confederated Tribes of Warm Springs

Alyssa Macy, Chief Operations Officer

Mathew Martinson, Indian Health Services

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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OFFICE OF
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November 19, 2018

Travis Wells, General Manager
Warm Springs Water Treatment Plant
Confederated Tribes of Warm Springs
P.O. Box 1196
Warm Springs, Oregon 97761

Re: **Treatment Technique (TT) Violation: Exceedance of Monthly Turbidity- 0.3 Nephelometric Turbidity Units (NTU)-Federal Violation Code # 44**
Warm Springs Water Treatment Plant PWS ID# 104101247

Dear Mr. Wells:

We recently reviewed your monthly report for Combined Filter Effluent(CFE) Turbidity and your results for October 2018 showed that **13.77%** of turbidity measurements were above **0.3 NTU** and **86.23%** were below the standard turbidity level.

Under the Surface Water Treatment Rule(SWTR), for systems using conventional filtration or direct filtration, the turbidity level of representative samples of a system's filtered water must be less than or equal to 0.3 NTU in at least **95%** of measurements taken each month. That is, 95 percent of the measurements recorded every 4 hours must be less than or equal 0.3 NTU over each calendar month period.

It is important to know that the SWTR established treatment technique requirements for turbidity to protect public health. Turbidity is an indicator for (1) filtration efficiency for removal of pathogens and other particles, and (2) the treatability of the water by disinfection. A high turbidity level indicates the potential for pathogen breakthrough and interference with disinfection efficiency. In addition, your water system must calibrate the continuous turbidity monitor(s) at least once per week according to the procedures established in Method 2130 B of the 17th edition of Standard Methods for the Examination of Water and Wastewater.

Based on the monthly CFE turbidity report provided by your system on November 12, 2018, our review showed that the Warm Springs water system has failed to meet the turbidity level treatment technique requirements under the SWTR. **As a result, this is a treatment technique violation and requires Tier 2 public notification.**

A public water system that violates a TT is required to notify the public of this TT violation as soon as practical, but no later than 30 days after learning of the violation, so please make sure to notify your customers no later than 30 days after you receive this letter. The notice must be delivered by hand or by mail. It must also be made available to other persons served by the water system that have not been reached by the methods listed above, for example via newspaper, email or by posting in a public

location. Please see the enclosure titled "Public Notification Delivery Instructions" which provides more details about public notification delivery. You must also send a copy of the notice that you deliver to your customers as well as a completed certification form (enclosed) to the Environmental Protection Agency no later than ten days after you notify your customers.

We have drafted a public notice which you can distribute to your customers (see enclosure with the heading "Important Information about Your Drinking Water"). If you would like to prepare your own public notice, please contact Ricardi Duvil, PhD., P.E., SWTR manager, at duvil.ricardi@epa.gov or (206) 553-2578 so he can advise you as to which sections of this draft notice must be included in your notice exactly as written. If you would like to use the enclosed version of the notice, but would like to change something in it, for example, the water system contact, please contact Ricardi. He can make the change and send the revised notice to you, or he can send you an electronic copy of the notice and you can make changes yourself.

If you have any questions, please contact Ricardi Duvil, Ph.D., P.E., SWTR Manager, at the email address and phone number above.

Sincerely,

Marie Jennings
Drinking Water Unit Manager

Cc: Alyssa Macy, Chief Operations Officer